

Application No.: 10/705,914

Docket No.: 8733.894.00

REMARKS

At the outset, the Examiner is thanked for the thorough review and consideration of the pending application. The Office Action dated January 26, 2009 has been received and its contents carefully reviewed.

Claim 9 has been amended. Claims 1-8 and 17-21 have been withdrawn from consideration as the result of the earlier restriction requirement. No new matter has been added. Claims 9-11, 13 and 14 remain pending in this application. Applicant respectfully requests favorable reconsideration in view of the remarks presented herein below.

Claim 9 is rejected under 35 U.S.C. §103(a) as being unpatentable over Maeda et al.(US 2001/0029054) in view of Rho et al.(US 6,243,146); further in view of Sai et al.(JP 2000-165002). Claims 10-11 and 13-14 are rejected under 35 U.S.C. §103(a) as being unpatentable over Maeda et al.(US 2001/0029054) in view of Rho et al.(US 6,243,146) and Sai et al.(JP 2000-165002); further in view of Ishikura et al.(US 6,219,125). Applicant respectfully traverses the rejections as being based upon references that neither teach nor suggest the combination of features recited by independent claim 9, as amended, and hence dependent claims 10, 11, 13 and 14.

With respect to independent claim 9, as amended, Applicant respectfully submits that none of Maeda et al., Rho et al., Sai et al. and Ishikura et al., singly or in combination, teaches or suggests the claimed combination including at least features of "forming a first copper compound layer *directly* on a substrate; forming a first copper layer *directly* on the first copper compound layer forming a second copper compound layer *directly* on the ohmic contact layer; and forming a second copper layer on the second copper compound layer *directly* on the ohmic

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contact layer” and “the island-shaped metal layer is disposed *directly* over the gate line” as recited by independent claim 9.

The Action alleges that Maeda et al. discloses “forming a first copper compound layer (1a; at least paragraph 0046) directly on a substrate; forming a first copper layer (1b) directly on the first copper compound layer; forming a second copper compound layer (6a; at least paragraph 0081) on the ohmic contact layer; and forming a second copper layer (6b) on the second copper compound layer on the ohmic contact layer.” However, in paragraph 0046, Maeda et al. discloses “The metal of the first layer 1a, 2a and 12a can be one metal selected from the group consisting essentially of Al, Ta, W, Cu and Ag, or an alloy comprising at least one of these metals as a main component. The metal of the second layer 1b, 2b and 12b to which nitrogen atoms are added can be a nitride of one metal selected from the group consisting essentially of Al, Ta, W, Cu and Ag, or a nitride of an alloy comprising at least one of these metals as a main component.” In addition, in paragraph 0081, Maeda et al. discloses “The metal of the first layer 6a, 7a and 16a can be one metal selected from the group consisting of Al, Ta, W, Cu and Ag, or an alloy comprising at least one of these metals as a main component. The second layer 6b, 7b and 17b comprising the metal to which nitrogen atoms are added can be a nitride of one metal selected from the group consisting of Al, Ta, W, Cu and Ag, or a nitride of an alloy comprising at least one of these metals as a main component.” Thus, the first layers (1a, 6a) of Maeda et al. are not copper compound layers, and the second layers (1b, 6b) of Maeda et al. are not copper layers. Accordingly, Maeda et al. fails to teach or suggest the features of “forming a first copper compound layer *directly* on a substrate; forming a first copper layer *directly* on the first copper compound layer; forming a second copper compound layer *directly* on the ohmic contact layer; and forming a second copper layer on the second copper compound layer *directly* on the ohmic contact layer” as recited by independent claim 9, as amended.

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Moreover, Applicant respectfully submits that Rho et al., Sai et al. and Ishikura et al., singly or in combination, cannot remedy the deficiencies of Maeda et al.

Meanwhile, the Action admits that Maeda et al. is silent regarding "forming the island-shaped metal layer." In addition, according to FIG. 6 and column 9, lines 52-58, Rho et al. discloses "To manufacture the TFT substrate according to the fourth embodiment of the present invention, as illustrated in FIG. 6, a metal pattern 31 is formed on the portion of the gate insulating layer 40 on the storage capacitor electrode 30 simultaneously with a source electrode 80 and a drain electrode 90. The metal pattern 31 is connected to the pixel electrode 140." Thus, Rho et al. fails to teach or suggest "the island-shaped metal layer is disposed *directly* over the gate line" as recited by independent claim 9, as amended. Moreover, Applicant respectfully submits that Sai et al. and Ishikura et al., singly or in combination, cannot remedy the deficiency of Maeda et al. and Rho et al.

Therefore, none of Maeda et al., Rho et al., Sai et al. and Ishikura et al., singly or in combination, teaches or suggests the claimed combination including at least features of "forming a first copper compound layer *directly* on a substrate; forming a first copper layer *directly* on the first copper compound layer forming a second copper compound layer *directly* on the ohmic contact layer; and forming a second copper layer on the second copper compound layer *directly* on the ohmic contact layer" and "the island-shaped metal layer is disposed *directly* over the gate line" as recited by independent claim 9, as amended.

Accordingly, claim 9 and its dependent claims 10, 11, 13 and 14 are allowable over the cited references.

Applicant believes the foregoing amendments place the application in condition for allowance and early, favorable action is respectfully solicited.

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If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at (202) 496-7500 to discuss the steps necessary for placing the application in condition for allowance. All correspondence should continue to be sent to the below-listed address.

If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time, or any other fees required to complete the filing of this response, may be charged to Deposit Account No. 50-0911. Please credit any overpayment to deposit Account No. 50-0911.

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Respectfully submitted,

By Valerie P. Hayes
Valerie P. Hayes
Registration No.: 53,005
McKENNA LONG & ALDRIDGE LLP
1900 K Street, N.W.
Washington, DC 20006
(202) 496-7500
Attorneys for Applicant